

Using a new dog to teach old tricks. Can an interactive whiteboard enhance the teaching and learning of German?

Eimear Kelly
EdTech 2009
Practitioner Strand

Abstract

This paper describes on-going small-scale action research on the integration of the interactive whiteboard [IWB] into the language classroom. With software that is largely intuitive and relatively easy to use, a range of task-based activities was developed with a view to ascertaining whether the use of an IWB to present and practise linguistic structures would

- a) promote active, collaborative learning,
- b) enhance the learners' experience, and
- c) have a positive impact on their output.

It is too early to say whether using the interactive whiteboard has had a perceptible impact on the accuracy of the students' implicit knowledge as measured by their performance in spontaneous language use. However, preliminary qualitative analysis of the data to date supports views reflected in various publications [Gray *et al*, 2002; Levy, 2002; Warschauer and Meskill, 2000) that the use of technology in general can motivate and engage both students and lecturers, while the IWB in particular can enhance the lecturer's capacity to reinforce concepts visually in a way that is more tangible, literally, than more traditional approaches. While the lecturer initially has to invest more time to plan and prepare classes using the IWB, this is compensated for by the sense of satisfaction gained at the end of a successful session. Students who may previously have resisted attempts to involve them actively in the lesson now volunteer to participate in IWB-based activities. There is less isolated learning both because the students are now part of a learning community, and also because they are completing real, communicative tasks which have a purpose so that the language structures are grounded in a context. Without overestimating the transformative potential of technology, it is expected that further research will support the intuition that the IWB is a valuable addition to the language lecturer's toolkit.

Key words:

interactive whiteboard; instructional technology; German; second language acquisition; action research; collaborative learning; kinaesthetic learners

Using a new dog to teach old tricks. Can an interactive whiteboard enhance the teaching and learning of German?

1. Introduction

In May 2008 a Community of Practice was established within Athlone Institute of Technology to engage with and reflect on the benefits of instructional technology across a range of disciplines. This project represented an opportunity to incorporate a recently-acquired instructional technology tool – the interactive whiteboard [IWB] – into the language classroom and aimed to ascertain whether doing so would

- a) promote active, collaborative learning,
- b) enhance the learners' experience, and
- c) have a positive impact on their output.

1.1 Scope and methodology

This small-scale action research was informed by theories of collaborative learning and second language acquisition and research into the use of technology in teaching and learning. Activities for use with the IWB were planned, implemented, observed, reflected upon and revised, with a view to building more informed understandings of the students' learning and the lecturer's teaching, and the data collected was qualitative rather than quantitative. Throughout the project the lecturer kept a log of all activities and of her perceptions of how well they had succeeded. Student feedback was also sought informally at the end of each session in which the IWB was used. The students involved in the study were in the second year of their programmes of study. They had started learning German in school and had chosen the subject as an elective at third level. It was explained to them at the start of the research that they would be involved in helping to assess the potential of the IWB to enhance their language learning experience, and at the end of the project they participated in a focus-group discussion.

2. Description of the action research

A range of activities was designed to accommodate a variety of learning and teaching styles, although the clear emphasis throughout was on interactive learning. The software supplied with the board is very intuitive and many of its functions were found to be ideally suited to language teaching. In many cases, the tasks designed were computer-enhanced versions of activities already widely used in language learning. Some activities would only have previously been possible for students sitting at a computer terminal, working in isolation, while others would have lost most of their relevance had it been attempted to complete them in any way other than in conjunction with the IWB.

2.1 Sample activities

As the following examples show, the IWB proved very useful for the presentation and practice of certain grammatical structures, particularly where such structures have an impact on the word order of the rest of the sentence, a feature of German that learners often tend to find confusing. While this type of formal instruction represents a quite old-fashioned, although no longer discredited,

approach to teaching grammar (Fotos, 2002), the IWB also facilitates an altogether more interactive, communicative and collaborative means of practicing grammar structures, as well as enhancing the presentation and discussion of cultural content.

2.1.1 Formal instruction

When teaching conjunctions, the interactive whiteboard allowed words be dragged and dropped from their original position to a new position in the sentence. Initially, this was demonstrated by the lecturer, and subsequently the students had the opportunity to make whatever changes they felt were necessary to further sample sentences, usually with input from the rest of the class if they were unsure or if their initial attempts yielded an incorrect answer. [In a follow-on to this session, a narrated screen-cast of the animated grammar explanation was created and up-loaded onto the college's virtual learning environment, where it could be watched as a tutorial for revision purposes.]

2.1.2 Communicative practice

Another activity was designed to develop the students' implicit knowledge of the impact certain prepositions have on the grammatical case of their objects, i.e. the nouns with which they occur in the sentence. Using the software supplied with the IWB, the lecturer created a document which contained a two-dimensional outline of a room, and images of items of furniture typically found in most homes. Embedded links were created to other pages on which relevant vocabulary and a summary of the grammar rules being practiced were displayed. Students were asked to sketch on paper a room in their house, identifying the location of each piece of furniture. They then worked in pairs, with one student describing the room she had sketched, in the target language and using the appropriate preposition, followed – one hoped – by the correct case. The student's partner dragged the items around the board with her finger, following the instructions given. In the event that an item of furniture ended up in the wrong corner of the room, the students were able to notice the gap between the target language they wanted to produce and the limitations of their own interlanguage, encouraging "pushed-output", a term referring to the learners' efforts to modify their output in the direction of increasingly target-like forms after they have received feedback that their utterances have not been understood (Swain and Lapkin, 1998, cited in Fotos, 2002). This type of exercise encouraged negotiated interaction as the learners negotiated meaning with each other by asking and answering questions to assist their understanding.

2.1.3 Language in context

The ability to engage as a group, as opposed to alone on a computer terminal, with interactive websites was one of the most obvious advantages afforded by the IWB over projections onto a regular whiteboard. During one session in which this feature was exploited, students were able to complete a virtual tour of the campus of a German university, following each other's directions to go right, left, to the end of the corridor etc, in search of various rooms and facilities. Each time they arrived at a particular point and "knocked on the door", a link opened to reveal facilities such as the library, computer rooms, labs or the canteen – from where they could tap on another link and even see the day's menu. As well as communicating with each other in the target language, students were able to experience, albeit virtually, life on a German campus, practicing vocabulary which they

had already been exposed to as part of their course in preparation for any eventual student exchange to Germany.

3. Student feedback

At the end of the second semester, a focus group discussion with the students was facilitated by another member of the community of practice to ensure objectivity. The discussion elicited a number of positive statements regarding the incorporation of the IWB into the language learning process, including the following representative examples:

“It helps to see the words actually moving.”

“It’s easier to remember what you have seen.”

“When you physically move words it’s easier to remember what you’ve done.”

“It gets you used to standing up in front of a group”

“It’s more interesting.”

“You can work as a team.”

“You can do things on the screen which you can’t do on paper.”

“It makes you nervous in case you get it wrong – but that makes you try harder to get it right.”

The only negative statements made related to the difficulties occasionally posed by the technology itself:

“Sometimes you can’t drag the words.”

“It takes time to set up.”

To a great extent, the students’ feedback answered the first two research questions asked at the outset. Based on their comments, it would appear that they recognized and appreciated the fact that tasks completed at the board were more collaborative and interactive, as illustrated by the use of the word “team”. They found it “interesting”, when frequently grammar classes are considered by the students to be quite dull, although the novelty aspect of the technology was probably a factor in that evaluation, as only one student had previously had any experience of IWB technology. The lecturer’s initial intuition that the kinesthetic aspect of the IWB would be one of its more attractive features was borne out by the learners’ own reactions to dragging and dropping words and images around the screen.

4. Conclusions and recommendations

The observations of the lecturer with regard to the impact of the IWB on the foreign language learning experience were similar to those of the students. Undoubtedly there was a significant increase in the amount of time needed to prepare materials for use in class, as there are few if any resources currently available and only some of the computer-assisted language-learning materials available are appropriate for use with this technology. However, any materials developed have the advantages of being custom-made and available for re-use in the future, and there are numerous relevant interactive websites which can be exploited for use with the IWB.

While the students claimed that the IWB made things easier to remember, more research needs to be carried out to ascertain whether the technology has, in fact, had a perceptible impact on the

accuracy of the students' implicit knowledge of grammar as measured by their performance in spontaneous language use. However, the lecturer certainly found that it made them more likely to participate in class, and noticed, particularly in exchanges which involved repeated use of certain structures, an improvement in the students' performance and an increased tendency to self-correct by the end of a session.

The activities outlined above illustrate that the IWB is more than another presentational technology, facilitating learning through attention (Laurillard, 2008). Used imaginatively it can support active forms of learning such as discovery, conversation, collaboration, problem-solving and construction. In the event that IWB technology is integrated into more class rooms at third level institutions, which is recommended based on the preliminary results of this research, language lecturers can address the current lack of available materials by working together to create a data bank of shareable resources.

References

Gray, C., Hagger-Vaughan, L, Pilkington, R. & Tomkins, S. (2002) The pros and cons of interactive whiteboards in relation to the key stage 3 strategy and framework. *Language Learning Journal* **32**, pp. 38-44

Fotos, S. (2002) Structure-based interactive tasks for the EFL grammar learner. In E. Hinkel & S. Fotos (eds) *New Perspectives on Grammar Teaching in Second Language Classrooms* New York: Lawrence Erlbaum Associates, pp.135-154

Laurillard, D. (2008) Digital technologies and their role in achieving our ambitions for education. Professorial lecture, Institute of Education, University of London

Levy, P. (2002) Interactive whiteboards in learning and teaching in two Sheffield schools: a developmental study. Sheffield: University of Sheffield

Stepp-Greany, J. (2002) Student perceptions on language learning in a technological environment: Implications for the new millennium. *Language Learning and Technology* **6**(1) pp.165-180

Warschauer, M. and Meskill, C. (2000) Technology and Second Language Teaching and Learning. In J. Rosenthal (ed) *Handbook of Undergraduate Second Language Education*. Mahwah, NJ: Lawrence Erlbaum, pp. 308-318